

Claims:

1. A method of tracking distributed statistical data retrieval in a network device including a plurality of cards each executing at least one statistical data gathering process, comprising:
 - 5 a. registering with a central process a data type identifier corresponding to each type of statistical data to be gathered by each statistical data gathering process;
 - b. establishing at the central process a list for each different data type identifier, wherein each list includes a process identification corresponding to each statistical data gathering process that registered the corresponding data type identifier;
 - 10 c. gathering statistical data through each of the statistical data gathering processes, wherein each of the gathered statistical data corresponds to one of the data type identifiers registered with the central process;
 - d. sending the gathered statistical data and corresponding data type identifier from each statistical data gathering process to the central process;
 - 15 e. combining received statistical data corresponding to each data type identifier into a common data file corresponding to each data type identifier;
 - f. closing the common data file for each data type identifier when each statistical data gathering process in the list corresponding to each data type identifier has sent statistical data corresponding to the data type identifier; and
 - 20 g. repeating steps c. through f. periodically.
2. The method of claim 1, wherein the data type identifier is a string name.
3. The method of claim 1, further comprising:
 - 25 h. starting a timer for each common data file;
 - i. detecting an expiration of one of the timers corresponding to one of the common data files if at least one of the statistical data gathering processes in the list corresponding to the common data file does not send its gathered statistical data;
 - j. closing the common data file;
 - 30 k. incrementing a count corresponding to the common data file and the statistical data gathering process that did not send its gathered statistical data;
 - l. determining whether the count exceeds a predetermined threshold;

m. deleting the statistical data gathering process that did not send its gathered statistical data from the list corresponding to the common data file if the count exceeds the predetermined threshold; and

wherein repeating steps c. through f. periodically further comprises repeating steps h.

5 through m. periodically.

4. The method of claim 3, further comprising:

sending an error notice to a network management application external to the network device if the statistical data gathering process that did not send its gathered statistical data is deleted from the list.

5. The method of claim 3, further comprising:

sending a notice to the statistical data gathering process that did not send its gathered statistical data when the count is incremented and does not exceed the predetermined threshold.

· 15 threshold.

6. The method of claim 1, further comprising:

adding a statistical data gathering process to one of the plurality of cards;

registering with the central process a data type identifier corresponding to each type of
statistical data to be gathered by the newly added statistical data gathering process;

adding at the central process a process identification corresponding to the newly added statistical data gathering process to any of the existing lists which correspond to any of the data type identifiers registered by the newly added statistical data gathering process;

establishing at the central process a new list for each different data type identifier registered by the newly added statistical data gathering process and not corresponding to any of the existing lists; and

wherein repeating steps c. through f. periodically includes the newly added statistical data gathering process.

30 7. The method of claim 1, further comprising:

adding a card including at least one statistical data gathering process to the network device;

registering with the central process a data type identifier corresponding to each type of statistical data to be gathered by the newly added statistical data gathering process;

adding at the central process a process identification corresponding to the newly added statistical data gathering process to any of the existing lists which correspond to any of the

5 data type identifiers registered by the newly added statistical data gathering process;

establishing at the central process a new list for each different data type identifier registered by the newly added statistical data gathering process and not corresponding to any of the existing lists; and

wherein repeating steps c. through f. periodically includes the newly added statistical

10 data gathering process.

8. The method of claim 1, wherein each of the statistical data gathering processes may be configured to gather statistical data and wherein gathering statistical data through each of the statistical data gathering processes comprises:
- 15 gathering statistical data through each statistical data gathering process configured to provide statistical data.
9. The method of claim 8, wherein each statistical data gathering process may manage a plurality of interfaces, and wherein gathering statistical data through each of the
- 20 statistical data gathering processes comprises:
- gathering statistical data from each interface; and
- combining statistical data corresponding to the same data type identifier.
10. The method of claim 9, wherein each of the plurality of interfaces may be configured to gather statistical data corresponding to particular data type identifiers and wherein gathering statistical data from each interface comprises:
- 25 gathering statistical data from each interface configured to provide statistical data.
11. The method of claim 1, wherein gathering statistical data through each of the statistical
- 30 data gathering processes, comprises:
- gathering a current statistical data sample periodically at a first period through each of the statistical data gathering processes.

12. The method of claim 11, wherein gathering statistical data through each of the statistical data gathering processes further comprises:
adding the current statistical data sample to a data summary each time the current statistical data sample is gathered through each of the statistical data gathering processes.

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13. The method of claim 12, wherein sending the gathered statistical data and corresponding data type identifier from each statistical data gathering process to the central process comprises:
sending the current statistical data sample periodically at a first period; and
10 sending the data summary periodically at a second period.

14. The method of claim 13, wherein, in normal operation, the second period is longer than the first period.

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